

ABSTRACT

a real-time control system having a fixed loop time is provided. The system includes an input having frequency ranging both above and below the fixed loop time; and a method for utilizing information provided by a pulse wheel and sensed by a sensor. The 5 method includes the steps of: providing a rotating shaft; providing a pulse wheel rigidly affixed onto the rotating shaft; providing a sensor sensing an information out of the pulse wheel, the sensed information comprising a first information and a second information; and when the rotating rate of the rotating shaft is greater than a predetermined value, averaging at least two pulses wherein one of the at least two pulses being related to the first information and at least one pulse being related to the second information; thereby, the second information is used along with the first information for a more accurate 10 representation of the information.